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The population of Burma: An analysis of the 1973 Census

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I am grateful to Dr. Richard B. Sturgis of Westinghouse Health Systems for kindly making data from the 1973 Census available to me.

ABSTRACT Drawing primarily on data from the 1973 Census, this paper describes recent trends in Burma's population, including population growth and distribution, the age structure and ratio of males to females, marriage practices and trends, composition of ethnic groups, literacy and educational attainment, labor force characteristics, and recent fertility and mortality. For contextual background, it also describes historical, geographic, and recent political conditions. Preliminary data from the 1983 Census are included where appropriate.

The unprecedented spurt during the 1960s in Burma's population growth rate (which was still modest by Asian standards) appears to have been due to both a drop in the death rate and a rise in the birth rate. Insufficient data prevent confirmation of this hypothesis, however. The observed age distribution of 1973 suggests that the population of Burma has entered the early phase of demographic evolution in which death rates decline but birth rates remain high. Fertility and mortality levels are still imprecisely known. Future trends in vital rates are likely to depend not only on the entry of large cohorts into prime reproductive ages, but also on further improvements in health and longevity among the urban and rural populations and on continued nodding recognition by the government of the problem of rapid population growth. The large-scale emigration of foreign residents (mainly Indians and Chinese) in recent years has caused the population to become preponderantly indigenous but has also created a shortage of professional and administrative personnel and has not solved the problem of interethnic tensions.

Dramatic changes in political and economic conditions have taken place in Burma since independence and the bloodless military coup of 1962. The consequences of these changes, particularly those wrought by the military regime, ought to be reflected in the structure and dynamics of Burma's population, and an analysis of aggregate demographic data from the 1973 Census provides an opportunity to assess these consequences. Needed as a source of voter lists for Hluttaw (Parliament) elections, the 1973 Census was the first country-wide census since World War II and yielded valuable demographic, social, and economic data.

Although a wealth of demographic data of reasonably good quality has existed for Burma for more than a century, research on Burmese demography has been limited, even by Asian standards. Three factors are associated with the sparsity of demographic literature on Burma. First has been the lack of trained demographers and social scientists of Burmese origin. Second was the government's policy of self-imposed isolation, adopted in 1962, which led it to restrict research in Burma by foreign scholars. The third factor was the limited circulation and availability outside Burma of published data, especially data from the postwar years. As a consequence, with the exception of a small collection of studies--which, incidentally, are

in disarray—Burma is virtually a *terra incognita* to students of international demography.

BURMA'S POSTWAR HISTORY

Strategically located in the Southeast Asian peninsula, Burma is slightly smaller than the state of Texas and borders the densely populated countries of Bangladesh and India on the west, China on the north, Thailand and Laos on the east, and the Bay of Bengal on the south and southwest (see Map). A mountainous country with rugged geographical boundaries, Burma has had little contact with the rest of the world throughout most of its history. With the advent of British colonial rule in 1825, however, the country was opened to international trade. After more than a century of colonialism, Burma regained her independence on 4 January 1947 and opted to remain outside the British commonwealth as a constitutional republic. U Nu was its first prime minister. His regime was greatly troubled by insurgencies and communist rebellions, and it ended in 1962 with a bloodless military coup led by General Ne Win. Soon after coming to power the military regime produced three related documents articulating its ideology, philosophy, and plan of action for a socialist transformation of the country. The Burma Socialist Program Party, known as the Lazin Party in Burmese, was institutionalized as the only political party. The trilogy of documents represented an amalgam of Marxist-Leninist ideas and Burmese-Buddhist values, providing an ideological basis for transforming Burma into a socialist state (see Steinberg 1981).

What were the effects of this radical political change on population policy and programs? The Revolutionary Government regards Burma as underpopulated and initially banned family planning and birth control altogether. Today abortion is still illegal except in cases in which a pregnant woman's health is in danger. Sterilization is also illegal but may be performed with proper authorization. Although no official statement about population policy has been issued, the government's attitude toward fertility is one of noninterventionism.[1] During the early years of the administration, it explicitly favored population growth, believing the country to be

1. Contraceptives are available only through hospitals and maternal and child health (MCH) centers. Nevertheless, the government appears to be increasingly cognizant of the pressure of rapid populaton growth on its limited health, education, and welfare services. It seems that "the need for family planning is being accepted cautiously. Family health counselling will be introduced in the next four years at some hospitals and MCH centres. Mothers will be encouraged to space births; contraceptives, which are otherwise not freely available, will be distributed" (ESCAP 1984:2).

Map. Burma and adjacent countries

underpopulated and wishing to assure an abundance of human resources for socialist reconstruction efforts.

Rules restricting immigration were instituted after independence, and in 1962 immigration was completely stopped except under the government's sponsorship. Emigration, however, was allowed. The nationalization of private enterprise and of wholesale and retail trade, most of which had been in alien hands, caused a large exodus of unassimilated foreign residents from the country. According to one estimate, at least 200,000 persons, most of whom were Indians and Pakistanis, left Burma during the first few years of the new government (Steinberg 1981:35).

POPULATION GROWTH

The 1973 Census recorded a total population of 28,921,226 inhabitants, including an estimated 836,713 persons in disturbed areas who were not directly enumerated. With this total population Burma ranked as the fifth largest nation in Southeast Asia in 1973, after Indonesia (127.6 million), Vietnam (42.7 million), the Philippines (42.0 million), and Thailand (41.0 million). Preliminary data from the 1983 Census indicate a total population of 35.3 million. According to the official projection, by the year 2001 Burma will have a population exceeding 63.22 million (Union of Burma 1963:16).

Burma's prehistory is obscure, but according to some historians there were inhabitants in the area of today's modern Burma during the stone age (Harvey 1947:1; Hall 1950:7). It has been conjectured that a preagricultural population numbering at most 30,000 inhabited the area until the second millenium B.C. (McEvedy and Jones 1978). Much later came a great migratory infiltration by three southern Mongolian groups—the Mon-Khmer, the Tibeto-Burman, and the Tai Chinese—in that order. The ancestry of the indigenous Burmese has been traced to those three groups. The Mon (or Talaing) of the Mon-Khmer group settled in the south, coming first under Indian influence and later receiving Buddhism and Sanskrit culture, which eventually spread to the rest of the country. In the north were the Burman, Chin, Kachin, and other groups of the Tibeto-Burman family.

Records of Burmese history, considered by historians to be authentic, date from 1044 A.D., the first year of the Pagan Empire founded by Anawratha (1044-77). Burmese cultural history began during that period and developed rapidly under the influence of three civilizations—the Pyu, the Mon, and the Arakanese—which had flourished before the establishment of the Pagan Empire. Most of Burma's precolonial history consisted of wars between the Burmese and the Talaing in the south and the Shan in the north. The strains of those historic conflicts between the ethnic groups have survived to the present time.

The eight hundred years of conquests and defeats—of the rise and fall of great dynastic empires founded by the dominant Burman ethnic group, who at various times attempted to unify the country—can be conveniently divided into three episodic dynasties: the Pagan (1044–1287), the Toungoo (1531–1752), and the Konbaung (1752–1885). It is not known when the first counts of population at local or regional levels were made. The earliest known dynastic documents containing survey-type data are the Burmese *sit-tans*, or records of inquests (Trager and Koening 1979). The sit-tans were sporadic attempts of the monarchs to gain information about local and regional conditions, probably for purposes of effective administration, taxation, and military or labor levies. They constitute a usable data source for a study of the historical demography of precolonial Burma.

During the colonial period estimates of Burma's population were made by Britons who visited Burma on diplomatic assignments (Kaul 1930). For example, Henry Burney, a British resident at the court of Ava between 1830 and 1837, used the sit-tans of villages and towns to estimate the population of the Burmese empire in 1783 and 1826 as 4,209,240 and 4,230,558 respectively (Burney 1842). The negligible population growth represented by his figures over the four decades is plausible because the Burmese in those days probably lived under conditions of high mortality, exacerbated by the frequent internecine warfare among kingdoms and tribes. In addition to being static, the Burmese population was rather small relative to its vast and rich agricultural land and given the virtual absence of major famines and other natural catastrophies. The reasons for the apparently small population during colonial times merit investigation.

The introduction of censuses by the British makes it possible to trace the history of population growth during the colonial period with some assurance. The first modern census was taken in 1872 and followed by a second in 1881. Thereafter decennial censuses were taken regularly until 1941. A census was conducted in 1941, but owing to the spread of World War II to Asia the returns were lost. The only surviving data from that census are the provisional district totals. The insurgencies following independence prevented the resumption of decennial censuses after the war, and therefore no countrywide census was taken again until 1973.

The 1872 and 1881 censuses covered only lower Burma. The 1891 Census included upper Burma but did not cover the entire country. In 1901 the enumeration included four-fifths of Burma, the remaining fifth being inaccessible and sparsely populated frontier areas. Because of the differences in area covered, growth rates based only on the censuses prior to 1901 would be exaggerated. Extensive adjustments are needed for the 1872, 1881, and 1891 censuses to make them comparable to subsequent censuses. In the present analysis the growth trend is measured from the 1901 Census, thus avoiding the problems of adjustment for incomplete data.

Table 1. Population growth: Burma, 1901-83

Census date or year of estimate	Population (in millions)	Area covered (km^2)	Annual growth rate
15 August 1872[a]	2.747	229,645	na
17 February 1881[a]	3.737	225,900	na
26 February 1891[a]	7.722	444,004	na
1 March 1901[a]	10.491	585,881	na
10 March 1911[a]	12.115	597,873	1.4
18 March 1921[a]	13.212	605,301	0.9
26 February 1931[a]	14.667	604,744	1.1
2 February 1941[b]	16.824	677,951	1.4
1953	19.101[c]	na	1.1
1963	22.541[c]	na	2.1
31 March 1973[d]	28.921	676,581	2.0
1 April 1983[e]	35.306	676,581	2.0

Sources: a. Censuses of India (1872-1931), Burma volumes. See Duncan (1875); Copelston (1882); Eales (1892); Lowis (1902); Webb (1912); Grantham (1923); Bennison (1933).

b. United Nations (1967:107).

c. Estimate from United Nations (1964:152).

d. Union of Burma (1973:viii).

e. Union of Burma (1983:4).

na—not applicable because of incomparability of data.

Burma's population grew rather slowly during the first half of the twentieth century, the growth rate remaining almost constant at slightly above 1 percent until World War II (Table 1). There were no widespread calamities during those decades except during the decade of 1911-21, when the influenza epidemic beginning in 1918 resulted in an absolute increase of only about 1.1 million persons. According to the authorities, the epidemic reduced the population growth rate in the area of vital registration to 9.6 percent from an estimated 12.45 percent that would have been registered during that decade had the epidemic not occurred. "Influenza thus accounts for a reduction by about 2.85 percent of the rate of increase for the decade in the registration area" (Grantham 1921:34). Growth rates of 2 percent, which are modest in modern times, were not reached until the 1960s. During the eighty-two years between 1901 and 1983 Burma's population more than tripled, at an average annual growth rate of slightly more than 1 percent. The largest absolute increment was 6.4 million observed in the decade of 1973-83. This was more than the increase experienced during the preceding two decades and was unprecedented in Burma's history, but it can hardly be considered phenomenal when compared with the experiences of other parts of Southeast Asia.

Perhaps the most remarkable aspect of Burma's population growth is that over half of the increase during the eighty-two-year period occurred only during the last twenty years. The accelerated growth in Burma, as in other parts of Asia, was brought about by a rapid decline in the death rate during the postwar years and possibly was combined with an increase in the birth rate. In the section on age structure, I offer some speculations about the possible recent increase in fertility.

Neither the growth rates nor the absolute increases in the Burmese population are large enough to cause alarm at present. But further acceleration in the growth rate would bring the population to the officially projected level of 63.2 million sooner than the year 2001 (Union of Burma 1963).

POPULATION DENSITY

Burma occupies an area of approximately 676,581 square kilometers (261,228 square miles). In 1973 the average population density was 42.7 persons per square kilometer, and by the 1983 Census it was 52.2. The present density level is more than twice the prewar level of 24.8 recorded in 1941 (provisional census total), when the area enumerated was larger. Yet when compared with other countries of Southeast Asia, Burma appears sparsely populated. A considerable portion of its land area consists of mountains and tropical forests that inhibit any large-scale human settlement with the existing level of technology.

The uneveness in the population's geographic distribution can be appreciated by comparing the density figures for the divisions and states (Table 2). Politically Burma is divided into seven divisions and seven states, and each in turn is divided into townships for administrative purposes. Each township is subdivided into wards and village tracts. This system was created by the Revolutionary Government, which became effective in 1972 and abolished the old Britisih administrative district as a political unit. Geographically, the states are largely mountainous regions whereas the divisions occupy the fertile lowlands of the river basins and the delta plain. The hills of Burma are the ecological niche of the indigenous minorities: Shan, Karen, Kayah, Chin, Kachin, Mon, Arakanese, and others; the ethnic Burman group is concentrated in the populous delta and the Irrawady River basin, which are the cultural hub of the country.

Table 2 reveals that the most thinly populated divisions and states in 1973 were most of the states and also the divisions of Sagaing and Tenasserim, containing vast territories of mountains and tropical forests where crude density ranged between 8.3 and 33 persons per square kilometer, well below the national level of 42.7. In contrast, the thickly populated divisions and states were all in the fertile lowlands of the river basins and the coastal strips, where density ranged between 46.6 and 313.5. The thickly populated

Table 2. Population density, by state and division: Burma, 1973

State/division	Population[a]	Area (km^2)[b]	Persons per km^2
Kachin State	737,333	89,042	8.3
Chin State	323,295	36,019	9.0
Shan State	3,179,546	155,801	20.4
Karen State	858,429	30,383	28.3
Kayah State	126,574	11,733	10.8
Mon State	1,314,224	12,297	106.9
Arakan State	1,712,838	36,778	46.6
Sagaing Division	3,119,054	94,626	33.0
Tenasserim Division	719,441	43,344	16.6
Pegu Division	3,179,604	39,404	80.7
Magwe Division	2,634,757	44,820	58.8
Mandalay Division	3,668,493	37,024	99.1
Rangoon Division	3,188,783	10,171	313.5
Irrawady Division	4,156,673	35,139	118.3
Union total	28,921,226	676,581	42.7

Source: Union of Burma (1973: tables 1 and 2).

a. Total population of states and divisions includes estimated populations of omitted areas (Union of Burma 1973: table 1).

b. Total area of states and divisions from Htain Lin (1976:42) and converted to square kilometers.

territories, with an average density of 116 persons per square kilometer, accounted for only about one-fifth of the total land area but more than half of the total population. The sparsely populated states, with an average density of only 16 persons per square kilometer, occupied nearly half of the total land area but accounted for less than one-fifth of the total population.

URBAN-RURAL DISTRIBUTION

Burma's level of urbanization is low. Less than a quarter of the population lived in settlements defined as urban in 1973, and there are few large cities. Only the capital city, Rangoon, had a population over one million. The 1973 Census did not tabulate the population of towns to determine the size-of-place distribution, but in all likelihood the degree of urban primacy has not diminished much since 1953 (see, e.g., Vajda 1960). During colonial times the large urban centers had high concentrations of foreign residents, especially of Indians and Chinese. For example, in 1931 more than 50 percent of Rangoon's population was Indian. Since independence, however, the major cities have gradually shed their alien character and today are centers of nationalism and national culture.

The 1973 Census, which covered the entire urban population residing in 283 towns of varying sizes, revealed that nearly one-fourth of the total population was urban. Preliminary figures from the 1983 Census showed an absolute gain in the urban population of 1.64 million persons, but the proportion urban (23.95 percent) was virtually the same as in 1973. The percentage increase in urban population was slightly lower than the perecentage increase in the total population (24.0 percent versus 25.7 percent), suggesting that natural increase was the chief source of urban growth during the decade and the amount of rural–urban migration was therefore quite small. International migration, which had been an important source of urban growth during colonial times, had only a negligible effect on urban growth during this period. Despite the definitional and data problems encountered in international comparisons of urbanization level, Burma can be described as one of the more urbanized nations in Southeast Asia in 1973. The most urbanized were the Philippines (31.8 percent urban in 1974) and Malaysia (26.9 percent in 1973); the least urbanized were Thailand (13.2 percent), Laos (14.7 percent), and Indonesia (17.4 percent).

AGE STRUCTURE

Deficiencies are probably present in the age data of both the prewar and the postwar censuses. Although the 1973 age data are alleged to be superior to those of previous censuses (Htain Lin 1976:41), some inaccuracy is inevitable, especially in the data from rural areas. Underreporting of infants and misstatement of age (particularly preference for the digits 0 and 5) have been shown to be major causes of defective age data (Sundrum 1957; Grantham 1921; Bennison 1931). Contrary to the Burmese habit of reckoning age according to one's age on the nearest birthday, the 1973 Census asked respondents to state their age in completed number of years. It also secured information on the date of birth. For the first time in Burmese census history, the census tabulated the age–sex distribution in single years.

The age distribution by three broad age groups for the census years 1901–73 is shown in Table 3. The data reveal two interesting changes in the Burmese age structure that are likely to have important demographic, social, and economic consequences in the future. First, in 1973 the age structure was distinctively younger than at any previous time, there being a marked increase in the proportion of the population under age 15 and a corresponding shrinkage in the 15–19 age group. Second, the age structure remained stable up through 1931, with the proportion of children varying between 36 and 38 percent. In sharp contrast to the prewar years, in 1973 the proportion of children had risen to over 40 percent, making the age structure (when viewed as an age pyramid) bottom-heavy.

Table 3. Percentage distribution of the population, by broad age group: Burma, 1901–73

Age group	1901	1911	1921	1931	1941	1953	1954	1973
0–14	37.2	37.8	36.3	37.4	u	33.9	37.1	41.5
15–19	56.7	57.2	57.9	57.5	u	62.1	58.4	52.5
60+	6.1	6.0	5.8	5.1	u	4.0	4.5	6.0

Sources: United Nations (1959b:47, table c); Union of Burma (1973:x).

u—data unavailable.

The rise in the proportion of young people is doubtless a result of gains in infant and early childhood survivorship due to improvements in such things as sanitation, public health, and medical care. But part of the increase may be attributed to an increase in fertility during the post-1962 period. Two reasons may be offered for the higher birth rate during this period. First, the Revolutionary Government's adoption of a pronatalist population policy and the consequent banning of family planning clinics may have resulted in a transformation of reproductive behavior. Second, improved health and survivorship of females of reproductive ages during this period may have produced "higher levels of fertility by reducing sterility, subfecundity, and pregnancy wastage and by extending the average lifetime of a marriage" (Preston 1975:193). The combined effect of these factors was to destabilize the age structure and usher in a new era of demographic growth. The 1973 age structure fits Coale's characterization of a "transitory age distribution" (Coale 1956:101).

The attenuation in the proportion of the population in the productive and reproductive ages resulted from the increase in the number of young dependents coupled with a decrease in the adult population, which was possibly due to the emigration of foreigners from the country after the coup. The proportionate share of elderly people in the population, however, remained fairly stable over the period.

As expected, the 1973 age-sex distribution by five-year age groups (Table 4) had large concentrations of the population in the young age groups and proportions declining rapidly with age, a pattern characteristic of a population in an early stage of demographic transition. The sharp tapering of percentages suggests a low expectation of life. The median age for the total population was 18.1 years, 17.9 for males and 18.3 for females. Two-thirds of the population was under 30 years of age. The somewhat low proportion in age groups 25–34 was due to the reduced cohorts born during World War II and the Japanese Occupation, which by 1973 had advanced to those ages. The restoration of law and order, the reunion of families, and the formation of new families after demobilization probably led to an

Table 4. Percentage distribution of the population, by age and sex: Burma, 1973

Age	Total	Male	Female	Sex ratio
<1	2.6	2.6	2.5	100.9
1–4	12.5	12.6	12.4	101.0
5–9	14.0	14.2	13.8	101.1
10–14	12.4	12.6	12.2	102.5
15–19	10.4	10.3	10.5	97.0
20–24	8.2	8.1	8.3	96.8
25–29	6.4	6.3	6.5	97.1
30–34	5.9	5.9	6.0	96.0
35–39	5.7	5.7	5.7	99.3
40–44	5.2	5.2	5.2	98.8
45–49	4.1	4.2	4.1	100.1
50–54	3.7	3.7	3.7	98.3
55–59	2.8	2.8	2.8	98.1
60–64	2.4	2.3	2.4	95.7
65+	3.7	3.5	3.9	89.1
All ages	100.0	100.0	100.0	98.9
Number	28,084,513	13,962,774	14,121,739	
Median age	18.1	17.9	18.3	

Source: Union of Burma (1973:12–13).

increase in births during the postwar years. The abnormalities observed in the prewar age–sex structures are no longer seen in the recent age distribution.

If this age structure persists in the future, the proportion of young people will remain above the 40 percent level and the imbalance in the proportions of dependents and productive persons will continue. From an economic standpoint this implies a mismatch of income generators and income users, which in turn will mean reduced savings and investments in such things as education, housing, health, social welfare, and other social needs. All other things being equal, the continued high proportion of young people will vitiate economic development and lower the already low level of living.

SEX COMPOSITION

The growth of economic opportunities concomitant with the colonial development of the delta frontier and the opening of Burma to foreign trade in the mid-nineteenth century stimulated a large influx of Indians and Chinese, who came by sea and over land. These developments resulted

in the transformation of the traditional, community type of society into a plural society made up of indigenous and foreign populations. The latter included the Europeans, Indians, and Chinese, most of whom were unassimilated and transient men. An examination of the historical pattern of sex composition in Burma reveals the demographic impact of colonialism. In studying the changes in Burma's sex composition over time, it is necessary to take the effects of colonialism and immigration into account.

From 1901 to 1931 the sex ratio (number of males per 100 females) for the total population was consistently masculine (Table 5). In 1973 and 1983, however, it was feminine and resembled closely the prewar ratio for the indigenous population. The decline of the sex ratio must have commenced after World War II and independence as a result of reduced immigration into the country. In 1973 the sex ratio of the foreign population was 115.3, which, although high, was considerably lower than the prewar figures, reflecting the settlement and assimilation of those who did not emigrate. The sex ratio of the indigenous population, on the other hand, has been feminine and virtually constant since 1901 at around 98.

Sex ratios for 1973 generally declined with age, reaching a minimum value of 89.1 at ages 65 and over (Table 4). The overall sex ratio for 1973 was 98.9. The excess of females is usually attributed to their longer life expectancy. But in Burma a contributing factor might be that females are more completely enumerated because of the greater freedom and status of women in Burma as compared with other countries in the region. This seems to be especially the case at ages 15–34, in which the excess of females is most noticeable.

The lower than expected ratio of males to females among infants under one year of age[2] might be due to higher male than female infant mortality, whereas the somewhat high sex ratio recorded at ages 10–14 could be explained by inaccurate age reporting of girls after puberty is reached. But it is also possible that declines in childhood mortality in recent years have affected proportionately more boys than girls. In 1973, for example, 42 percent of males but only 40.9 percent of females were under age 15. In contrast, the sex ratios in the age groups between 15 and 34 are each lower than the total despite the higher risk of mortality faced by females in childbearing. The deficit of females at ages 35–60 is also puzzling.

2 The sex ratio at birth in human populations has been found to vary at around 105 males to every 100 females. The larger number of males born and the variability in sex ratios at birth among different populations are attributed to genetic, biological, and socioeconomic factors, but the relative effects of each are not known precisely. Empirical studies have reported low sex ratios at birth for populations with low standards of living, high proportions of stillbirths, and higher average ages of mothers (United Nations 1973:270).

Table 5. Trend in sex ratios: Burma, 1901–83

Census year	Population		
	Total	Indigenous	Foreign
1901	103.8	97.8	201.2
1911	104.2	97.7	215.1
1921	104.6	98.0	193.0
1931[a]	104.3	97.0	209.2
1973[b]	98.9	98.5	115.3
1983[c]	98.4	u	u

Sources: a. Censuses of India (1901, 1911, 1921, 1931). See Lowis (1902); Webb (1912); Grantham (1923); Bennison (1933).

b. Union of Burma (1973:ix).

c. Union of Burma (1983:3).

u—data unavailable.

Whether this is a mere statistical anomaly or a real deviation due to some social or environmental factors is difficult to ascertain.

The urban population in 1973 had a nearly balanced sex ratio (100.4) whereas the rural population had a low ratio (98.4). A low rural sex ratio suggests migration of males from rural to urban areas. One reason may be the government's low agricultural procurement prices, which make farming and farm work less lucrative and thus encourage migration to towns (Steinberg 1981:107).

MARITAL STATUS

Marriage is a strictly secular institution in Burmese society. Buddhism, the religion of nearly 90 percent of the people, neither endorses nor sanctifies marriage, unlike other major religions. Both marriage and divorce are controlled through the social mores and are undertaken by mutual consent. The marriage ceremony is usually a small feast officiated by the elders. A marriage may be dissolved through "renouncement"—that is, entrance of the husband into the Buddhist priesthood. Persons affected by such marital dissolution are classified as "renounced."

The Burmese registration system does not collect statistics on marital status, and the decennial census is therefore the main source of information about nuptiality. Little is known about the marriage pattern of Burmese society, yet such knowledge would be of great demographic value as it could provide a basis for inferences about reproductive behavior in a country where few births occur out of wedlock. The relationship in most societies between marriage patterns and fertility has been shown to be

strong, and such factors as average age at marriage, the proportion of the population that ultimately marries, and duration of marriage are important in explaining both high fertility and fertility decline (Hajnal 1965; Matras 1965).

According to the 1973 Census, 29.7 percent of males were single, 62.6 percent were married, 4.9 percent were widowed, 1.4 percent were divorced, and 1.5 percent were renounced (Table 6). The percentages for females were 24.5 single, 61.1 married, 12.0 widowed, 2.2 divorced, and 0.2 renounced. The lower remarriage rate of women, common also in other societies, is partly responsible for the higher observed proportion of married men than of married women in Burma. Because of low mortality and low remarriage rates among women, the proportion of widowed females was more than twice that of males, and the difference widened sharply with age so that the ratio of widows to widowers was three to one by age 60. Nash and Nash (1963) reported the very low incidence of remarriage among widows in Burma in their microdemographic study of a sample of villages in upper Burma. The overall marriage pattern in Burma revealed by Table 6 indicates that more men than women are single, married, and renounced and that more women than men are divorced and widowed.

Examination of age differentials in marital status for each sex in 1973 revealed that under age 35, proportionately more men than women were single and more women than men were married, widowed, or divorced (data not shown). The obvious reason for this finding is the universal tendency for females to marry at younger ages than males. The differential in marital status between men and women at ages 35 and over was substantial but in the reverse direction. Although practically all men and women were married, more men than women were married and more women than men were single, widowed, or divorced. From ages 35–39 onward the deficiencies in married and the surpluses of widowed among women were due to the differences in age at marriage and normal differences in mortality between the sexes as well as the general practice among divorced or widowed men of selecting new brides from younger cohorts.

Renouncement as a separate marital status category first appeared in postwar censuses, and it is not clear how the renounced persons were classified in the prewar censuses. Hauser and Kitagawa (1954) considered renounced persons equivalent to being separated or divorced. But in a society such as Burma's with an institutionalized monastic order that any man may join at any time irrespective of his marital status, not only married men but also divorced, widowed, and single men who have renounced plans for marriage join the priesthood. Therefore, the renounced category includes persons (male and female) of any previous marital status. For this reason they are treated here as a distinct group.

Table 6. Marital status of the population 15 years old and older, by age and sex: Burma, 1973

Sex and age group	Number	%					
		Total	Single	Married	Widowed	Divorced	Renounced
Males							
15–19	1,442,923	100.0	92.2	5.9	0.1	0.3	1.5
20–24	1,135,581	100.0	55.2	41.7	0.4	1.4	1.3
25–29	884,403	100.0	23.7	72.5	0.9	1.7	1.2
30–34	815,471	100.0	10.3	85.3	1.6	1.8	1.0
35–39	794,586	100.0	6.1	88.7	2.4	1.7	1.1
40–44	730,791	100.0	4.4	89.0	3.9	1.6	1.1
45–49	579,833	100.0	3.5	88.0	5.6	1.6	1.2
50–54	517,465	100.0	3.2	85.4	8.3	1.6	1.6
55–59	387,127	100.0	3.0	82.0	11.4	1.6	2.1
60–64	323,737	100.0	2.9	76.4	16.5	1.5	2.6
65+	485,241	100.0	2.9	61.4	30.1	1.4	4.2
Total	8,097,158	100.0	29.7	62.6	4.9	1.4	1.5
Females							
15–19	1,488,063	100.0	78.0	20.7	0.2	1.0	0.1
20–24	1,172,906	100.0	35.5	60.9	0.9	2.6	0.1
25–29	911,147	100.0	16.6	78.7	1.8	2.8	0.1
30–34	849,280	100.0	9.3	84.5	3.4	2.7	0.1
35–39	800,144	100.0	7.0	85.1	5.3	2.5	0.1
40–44	739,461	100.0	6.2	81.9	9.2	2.6	0.1
45–49	579,259	100.0	5.9	77.4	14.0	2.5	0.2
50–54	526,239	100.0	5.7	68.5	23.0	2.5	0.3
55–59	394,404	100.0	5.8	60.0	31.6	2.2	0.4
60–64	338,221	100.0	5.7	46.9	44.9	2.0	0.5
65+	544,391	100.0	5.5	27.3	65.0	1.3	0.9
Total	8,343,515	100.0	24.5	61.1	12.0	2.2	0.2

Source: Union of Burma (1973:52–53).

It is clear from Table 6 that in Burma renouncement is a predominantly male condition, 1.5 percent of men having declared themselves in that category in 1973 compared with 0.2 percent of women. Interestingly, the proportion renounced among males exceeded the proportion divorced. The relationship between age and the proportion renouncing followed a J-shaped curve, signifying higher proportions among the young and especially among the old than among those of intermediate ages. The high proportion among the young reflects the custom of *shinbyu* (roughly equivalent to baptism among Christians) in Burmese society. According to the custom every Buddhist boy joins the fraternity of Buddhist priests by entering the monastery

and donning a saffron robe for at least a week or two. The proportion of the 1973 population in the renounced category was lowest in the reproductive age range but was sharply higher among men past middle age. This pattern corroborates the conclusion reached by Nash and Nash that as Burmese become older, their concern for religion and rebirth in the next life grows stronger: "Devotion, meditation, giving, turning the mind from this world are all means of getting merit (*kutho*) and hence building one's moral capital. With all of these things marriage and the family interfere. The most devoted, the most glorious moral estate of man is to be a monk" (Nash and Nash 1963:263). Considering the small frequency and the age pattern of renouncement, the fertility effect of this institution is not likely to be significant.

Although only small rural–urban differentials in marital-status patterns were observed in 1973, rural areas generally had a lower proportion of single, divorced, and renounced persons and a higher proportion of married and widowed persons than did urban areas. Differences between rural and urban areas in the age–sex pattern and in age at marriage for both males and females are responsible for the observed differentials in marital composition. The mean age at marriage estimated by the Hajnal (1953) method yielded 25.3 for males and 22.3 for females in urban areas as compared with 23.7 and 21.3 for males and females respectively in rural areas. The proportion renounced in urban areas was almost twice as high as in rural areas (1.4 versus 0.7 percent). The explanation for this difference is not obvious. Possibly higher unemployment in urban areas and the migration of monks to urban areas explain some of the observed difference.

RACE AND ETHNIC COMPOSITION

The diversity of race and ethnic composition is perhaps the outstanding aspect of the Burmese population. The racial ancestry of the indigenous people of Burma is usually traced to the Mongolian tribes who came to the plains of central Burma in successive waves from the north, possibly from Tibet and western China. Thus racially the Burmese belong to the Mongolian racial stock that is akin to the Chinese, but because of their greater contact with the Indians they have developed an Indo-Buddhist culture. Buddhism of the Mahayana variety has played a key role in shaping Burmese social and cultural values.

The 1973 Census secured information on race by directly inquiring about the race of respondents and their parents. Thus race was defined subjectively rather than by the criterion of respondents' language, as was the case in the prewar censuses, or by other operational indices such as dress. Officially, three broad groups of races were identified: the indigenous races, nonindigenous or foreign races, and Burmese mixed with foreign races (Ta-

Table 7. Percentage distribution of racial and ethnic groups, by sex: Burma, 1973

Group	Total	Males	Females	Sex ratio
Burman	68.0	67.6	68.2	98.0
Shan	8.9	9.0	8.9	100.1
Karen	6.6	6.6	6.6	97.9
Arakanese	4.4	4.5	4.4	100.1
Other indigenous races	6.7	6.7	6.6	99.1
Mixed Burmese and foreign races	1.5	1.5	1.5	102.7
Chinese	0.8	0.9	0.8	113.5
Indians and Pakistanis	1.9	2.1	1.8	113.1
Other foreign races	1.2	1.3	1.2	105.1
Total	100.0	100.0	100.0	98.9
Number	28,084,513	13,962,774	14,121,739	

Source: Union of Burma (1973:46).

ble 7). Of the indigenous races—which are really ethnic groups rather than racial groups—the Burman group comprised over two-thirds of the population. The remaining indigenous groups, who constituted the ethnic minorities, made up 26.6 percent of the population. Of these the Shan, Karen, Arakanese (or Rakhine), Kayah, Chin, Kachin, and Mon each have their own council of state with control over local affairs.

The ethnic balance in Burma has changed dramatically since World War II and independence. The proportion of foreign races has fallen sharply. The Indian population, which was the largest foreign group in the prewar years, declined from 7.0 percent of the total population in 1931 to 1.9 percent in 1973. The Chinese population also diminished from its prewar level of 1.3 percent in 1931 to 0.8 percent (Bennison 1931:224). Whereas the decline in the size of the Indian and Pakistani groups was due largely to emigration, the shrinkage of the Chinese proportion may be due in part to the tendency of Chinese to identify themselves as Burmese. The foreign and mixed races, forming just over 5 percent of the population, have dwindled in importance in recent years. The sex ratios of the Indians, Pakistanis, and Chinese are still higher than those of other groups.

The racial and ethnic data from the 1973 Census suggest considerable indigenization of the poulation in recent times mainly as a consequence of the mass exodus of the nonindigenous groups rather than the assimilation of foreign races into Burmese society. On the basis of the data we may conclude that the phenomenon of a plural society and the associated problem of achieving social integration, as described by Furnival (1956:30), have nearly disappeared from modern Burma. But in their place have

emerged a multiethnic society and the usual problems associated with ethnic differences. Burma has been beset with ethnic-based insurgencies since independence. The achievement of peaceful coexistence between the Burman majority and several strongly differentiated ethnic minorities is a major concern in Burma at the present time. Interethnic tensions are not new; they go back to the days of the Burmese kings. Throughout Burma's long history there have been frequent struggles between the Burman on the one hand and the Shan and the Mon on the other. A few attempts at national unification were successful but did not last. The British dealt with the problem by administering the minorities separately from the rest of the population. Thus the colonial policy isolated the groups and effectively blocked majority-minority intercourse. The latent consequence of that policy was to petrify the historic pattern of interethnic relationships. The problem constitutes a serious impediment to the country's development efforts and is not likely to be solved in the immediate future.

LITERACY AND EDUCATION

Because Buddhist monastic schools (*kyaungs*) have existed in nearly all villages since traditional times, Burma is among the few developing countries with a high rate of literacy. The monastic schools are open to all boys. Their curriculum was—and is still—designed to maintain social and cultural structures rather than to stimulate social change, and subjects included religion, morals, the Burmese and Pali languages, and arithmetic. A pupil learned how to live life as a Buddhist rather than how to earn a living. With the advent of British rule there appeared for a time three other types of schools named after the language of instruction: vernacular, Anglo-vernacular, and English schools. Today school attendance is compulsory for both sexes, and most children begin school at age five.

In 1966 the school system underwent reorganization in accordance with the 1966 Fundamental Educational Act. All but a few private schools, which provided education to the children of diplomats and other foreigners, were affected. The intent was to open up educational opportunities to children from all strata of society. The newly organized system consisted of three levels: primary, middle, and high school. Standards 1 through 5 were taught in primary schools; standards 5 through 8, in middle schools; and standards 9 and 10, in high schools. Reforms in higher education were introduced in 1977 to achieve greater decentralization and make higher education accessible to the entire population. Sixteen regional colleges, similar to junior colleges in the United States, were opened. The colleges have emphasized mathematics, science, and technology at the expense of the social sciences.

In addition to these changes, the military government launched several volunteer-operated literacy campaigns in an attempt to eradicate illiteracy. The campaigns were directed mostly toward rural areas with a view toward bringing about the social and political transformation of the peasantry. In 1971 the United Nations Educational, Scientific, and Cultural Organization (UNESCO) awarded the Mohammad Reza Pahlavi Prize to Burma for its fight against illiteracy.

Data on literacy and educational attainment of the Burmese population have been available since the first census of 1872, but the analysis presented here is based on the 1973 Census data only. As can be seen from Table 8, overall illiteracy was quite low. Male illiteracy was considerably lower than female, and the rate among persons under age 30 was substantially below the rate for the total population. For both sexes the illiteracy rate was positively related to age, suggesting a general decline in illiteracy from one generation to the next. There were sizable sex differences in the illiteracy rate in every age group, but the gender gap was narrower among the younger generation. This finding may be interpreted as evidence of the literacy campaigns' greater success among females than among males.

Urban areas showed an expected lower level of illiteracy than rural areas (20.0 percent versus 37.3 percent). Urban males and females both had higher literacy levels than their rural counterparts. The percentage illiterate also differed among race groups. The Burmese and the mixed Burmese and foreign races had the lowest illiteracy (22.6 and 28.1 percent respectively), whereas the Indians and Pakistanis and the other indigenous races had rates exceeding 50 percent. Since literacy as defined by the 1973 Census was the ability to read and write in the Burmese language, the observed

Table 8. Illiterate persons as a percentage of the total population 10 years old and older, by sex: Burma, 1973

Age group	Total	Males	Females
10–14	22.4	18.3	26.7
15–19	18.7	12.7	24.5
20–24	20.2	11.9	28.1
25–29	23.3	13.2	33.1
30–34	29.2	16.2	41.8
35–39	31.3	15.5	46.9
40–44	35.0	18.7	51.1
45–49	34.0	17.7	50.2
50+	40.9	20.9	59.9
All ages	27.8	16.3	39.1

Source: Union of Burma (1973:72–73).

Table 9. Percentage distribution of the population 10 years old and older, by sex and educational level: Burma, 1973

Sex	Education completed		
	None	1–4 standards	5+ standards
Males	60.2	22.7	17.1
Females	68.3	23.4	8.3
Total	64.3	23.0	12.7
Number	12,809,254	4,589,641	2,522,940

Source: Union of Burma (1973:72–73).

differences in literacy among racial groups may indicate their different degrees of assimilation into the Burmese culture rather than actual levels of literacy.

By 1973, 23 percent of the population 10 years old and older had completed at least one standard of primary education, and 12.7 percent had completed middle school or higher levels of education (Table 9). Of the 7.1 million persons 10 years old and older with one or more standards of education, nearly 45 percent were females. Although females slightly outnumbered males in completing primary education, their proportion dropped to about one-half at secondary and higher levels.

Urban–rural differentials in educational attainment were consistent with the differentials in literacy. Of the rural population 5 years old and older, 75.1 percent was reported as having no schooling at all, in contrast to 42.7 percent in urban areas. Nearly one-third (29.4 percent) of the urban population had completed some primary education, and 28 percent had completed middle school or higher levels of education. The corresponding percentages for rural areas were 19.9 and 5.0.

Educational attainment among persons 10 years old or older was inversely related to age, as expected. The proportion of the population having no schooling ranged from 43.9 percent among persons 10–14 years old to 92.8 percent among persons 75 and older. The percentage of persons who had completed some primary schooling was only 4.1 for persons 75 and older but 48.8 for the 10–14 age group. The population 10–14 years of age accounted for about 70 percent of those who had had some primary schooling and over half of those who had completed middle school or higher levels of education. These differences in educational attainment between young and old indicate an increase in the rate of school attendance among the postindependence cohort (but do not take into account the mortality and migration of prewar cohorts).

Literacy and education are functional requisites of industrialization. The data from the 1973 Census suggest that progress in these fields has been

impressive despite the difficulties of war, insurgencies, communist uprisings, and the postwar reconstruction efforts.

LABOR FORCE CHARACTERISTICS

The 1973 Census provided fairly extensive tabulations of the labor force characteristics of Burma's population. The labor force was defined as the noninstitutional, or household, population of ages 10 and over that was either working or seeking work during the reference period of fourteen days prior to the enumeration date. According to that definition, 47.7 percent of the population participated in the labor force, nearly two-thirds of the labor force consisted of males, and a little over one-quarter of the labor force comprised either youths between ages 10 and 19 or persons over 60 years of age. Labor force participation rates among the youth and the elderly were 26.8 and 42.4 percent respectively, considered low for an agrarian society. Less than 2 percent of the labor force was unemployed. Of the population not in the labor force, half consisted of unpaid household workers, of whom nearly nine-tenths were females—a figure that reflects the persistence of the traditional role of married women in Burmese society. Students constituted over one-fourth of the population not in the labor force and were evenly divided between the sexes. The remainder of the non-labor-force population was classified as retired, disabled, in ill health, or unemployed seasonal workers and "other" (Table 10).

Table 11, which presents the composition of Burma's labor force by major industrial categories, reflects Burma's low level of industrialization. In 1973

Table 10. Noninstitutional population 10 years old and older, by labor force status and sex: Burma, 1973

Labor force status	Total	Males	Females
In labor force	9,367,054	6,262,912	3,104,142
(%)	(47.7)	(65.3)	(30.9)
Employed	9,199,395	6,128,617	3,070,778
Agriculture	5,871,783	4,083,458	1,788,325
Nonagriculture	3,327,612	2,045,159	1,282,453
Unemployed	167,659	134,295	33,364
(% of labor force)	(1.8)	(2.1)	(1.1)
Not in labor force	10,253,659	3,322,569	6,931,090
Household workers	5,425,978	298,236	5,127,562
Students	2,739,032	1,616,019	1,123,013
Other	2,088,829	1,408,314	680,515
Total	19,620,713	9,585,481	10,035,232

Source: Union of Burma (1973: tables 22,23).

Table 11. Percentage distribution of the employed population 10 years old and older, by industry and sex: Burma, 1973

Industry	Total	Males	Females
Agriculture, hunting, forestry, and fishing	63.8	66.6	58.2
Mining	0.8	1.0	0.4
Manufacturing	10.4	7.5	16.3
Construction	1.6	2.2	0.4
Electricity, gas, and related industries	0.2	0.3	0.0
Wholesale and retail trade	11.2	7.4	18.5
Transportation and communication	3.0	4.4	0.2
Services	5.7	7.0	3.1
Unclassified	3.4	3.7	2.9
Total	100.0	100.0	100.0
Number	9,199,395	6,128,617	3,070,778

Source: Union of Burma (1973: table 22).

most of the work force (64.6 percent) was engaged in farming, fishing, and mining industries; only 12 percent was in the secondary sector of manufacturing and construction. The tertiary sector had absorbed one-fifth (20.1 percent) of the work force.

The occupational structure (shown in Table 12) was similarly dominated by rural-oriented farming and related occupations. Nearly two-thirds of the working population sought their livelihood through agricultural pursuits. At the other extreme was a small group of administrators, executives, and managers (less than 0.5 percent of workers) who administered a large body of skilled and semiskilled craftsmen and production process workers. Workers in other white-collar occupations were also sparse. Professional, technical, and related occupations accounted for 2.2 percent; clerical and kindred workers, 2.3 percent; and sales workers, 8.5 percent.

The male and female occupational structures show interesting differences and similarities. Proportionately more males than females were employed in administrative, managerial, clerical, and service occupations, whereas the reverse was true for sales occupations. Yet the proportion of females in professional and related occupations was about the same as that of males.

The 1973 data thus indicate that the structure of the Burmese labor force had little differentiation. As expected, it represented an essentially agrarian society in which nearly two-thirds of the work force was engaged in

Table 12. Percentage distribution of the employed population 10 years old and older, by occupation and sex: Burma, 1973

Occupation	Total	Males	Females
Professional and technical	2.2	2.3	2.2
Administrative and managerial	0.4	0.5	0.2
Clerical	2.3	2.9	1.1
Sales	8.5	5.0	15.4
Services	1.7	2.2	0.7
Agriculture, hunting, forestry and fishing	63.3	65.9	58.0
Production and related work	20.7	19.8	22.5
Unclassified	0.9	1.4	0.0
Total	100.0	100.0	100.0
Number	9,199,395	6,128,617	3,070,778

Source: Union of Burma (1973: table 25).

agriculture and related work and only a small number of workers were administrative, professional, and clerical personnel.

FERTILITY AND MORTALITY

The vital registration system, begun in India in 1864, was first introduced to some parts of lower Burma and then gradually extended to other parts of the country. By about 1907 it covered over 80 percent of the population (Sundrum 1957:7).

In Burma, as in most nations of the region, the registration of births and deaths has remained incomplete even in areas covered by the registration system. Censuses have shed light on the extent of underregistration. It was estimated in 1911, for example, that as many as 20 percent of the births in the city of Mandalay were unregistered (Webb 1911:43). Moreover, the types of information on births and deaths are grossly inadequate for any in-depth analysis of fertility and mortality. For example, birth statistics have not been published by age of parents, birth order, or occupation of parents.

In spite of these defects the vital statistics of Burma, under certain conditions, can provide valuable information about fertility and mortality trends. When used in combination with the census data they can provide useful insights into the salient features of Burmese demography.

The registration of births and deaths was interrupted during World War II and the Japanese Occupation, and it did not resume until 1947. Postwar statistics are limited to certain cities and towns. A glance at Table 13, which

Table 13. Vital statistics for Burma, 1920–39 and 1951–78

Period or year	Births per 1,000 population	Deaths per 1,000 population	Infant mortality (deaths per 1,000 infants under age 1)
1920–24	28.5	21.1	184.6
1925–29	24.3	19.1	204.9
1930–34	27.6	18.3	198.2
1935–39	32.1	22.0	202.3
1951	46.1	39.3	252.8
1957	35.8	21.3	164.3
1962	36.2	16.0	121.5
1967	41.0	12.2	66.5
1970	36.2	10.8	62.8
1972	38.8	11.3	61.0
1973	35.8	11.1	56.8
1974	33.7	11.3	49.8
1975	31.5	10.5	53.8
1976	29.3	10.6	54.2
1977	29.1	10.4	56.3
1978	28.3	10.1	50.0

Sources: Births, 1920–24 to 1935–39: United Nations (1959a:210–11).
Deaths and infant mortality, 1920–24 to 1935–39: United Nations (1967:288–89, 348–49).
Data for 1951–78: Steinberg (1981:87).

gives crude birth, death, and infant mortality rates for prewar years (in five-year averages) and for the postwar years up to 1978, shows that both the death rate and the infant mortality rate declined continuously after the war. The trend in the birth rate, which is less clear, suggests several influences. Prewar birth rates were generally low, perhaps reflecting low fertility during the colonial times. Although the postwar rates were for urban areas only, they were much higher than the prewar figures. Since 1972 there has been a slight downward tendency in the birth rates.

At least two reasons may be speculated for the higher birth rates in the immediate postwar years. First, a postwar baby boom began about 1945 in many countries of the world and may have occurred also in Burma. But the magnitude of the surge in births and its duration cannot be determined owing to lack of data. Second, since the postwar birth rates are for urban areas, where the registration of births was likely to be more complete than in rural areas, exclusion of rural births from the calculation would yield higher figures than for the country as a whole.

Deficient as they are, the official data can hardly be relied upon to indicate the true magnitude of Burma's birth, death, and infant mortality rates.

To infer the probable levels of fertility and mortality, experimental calculations were done to estimate birth and death rates. The calculations employed the Coale and Demeny (1966) West regional model life tables and stable populations and the assumptions of stability and quasi-stability of the Burmese age distribution.[3] The following two sets of estimates were derived by pairing the 1973 Census age distribution for females with six hypothetical growth rates; in the case of quasi-stability a decline in mortality since 1953 was assumed. If the growth rate of 2.0 percent per annum is assumed to be most probable between 1953 and 1973, the stable estimate yields annual rates of 39.2 births and 19.2 deaths per thousand population, whereas the quasi-stable estimate gives somewhat higher rates of 41.6 and 19.6. Comparison of these figures with those given in official Burmese publications suggests that the actual birth and death rates might be higher than indicated. The differences probably reflect underregistration.

	Stable population		Quasi-stable population	
Growth rate (%)	Birth rate	Death rate	Birth rate	Death rate
2.0	39.2	19.2	41.6	19.6
2.1	38.5	17.5	41.2	17.9
2.2	37.7	15.7	40.8	16.1
2.3	36.9	13.9	40.3	14.3
2.4	36.3	12.3	39.9	12.6
2.5	35.7	10.7	39.6	11.0

Because of the defects in death registration the calculation of a life table for Burma has been a particularly difficult task, and even today there is no continuous series of life tables for the population of Burma. Perhaps no measure speaks more eloquently of the mortality conditions of a population than expectation of life at birth. Life tables computed solely on the basis of the 1921 and 1931 censuses showed expectation of life for Burma

3. United Nations Manual IV (United Nations 1967) describes a collection of new techniques for estimating birth rates, death rates, and other demographic parameters of populations for which only incomplete data exist. The method based on stable and quasi-stable population models has been used to arrive at the estimates of birth and death rates for Burma. The method requires data on the decennial growth rate and a quinquennial age-sex distribution. This method of estimation depends upon several assumptions about the population: that it is closed to migration, that age data are reliable, and that stable population models and the life tables to be used in the estimation reflect the underlying characteristics of the population for which vital rates are being estimated. It is important to bear these limiting assumptions in mind when interpreting the estimated figures. The actual calculations were done by means of the subroutine ONECN of the U.S. Census Bureau's computer programs for demographic analysis (see Arriago 1976:293–321).

to be 30.8 years. This figure was higher than that of any of the major provinces of India, where life expectancy ranged between 24.4 and 29.4 years during the same period. Kingsley Davis (1951:64) remarked that Burma "has a better record than any part of India and this has always been the case. The difference seemingly represents a real fact about Burma in comparison to the Indian areas."

If the trends in the male and female life expectancy in Burma since 1921, presented in Table 14, are to be trusted, mortality of the Burmese people has improved considerably over the past half century. Most of the improvement, however, took place in the period immediately following World War II.

SUMMARY AND CONCLUSIONS

Analysis of the 1973 Census indicates that the population of Burma has entered the early phase of demographic transition in which death rates decline but births remain high. Mortality has fallen since World War II, and expectation of life at birth has substantially improved for both sexes. Although direct evidence is lacking, it is probable that fertility rose after 1962 in response to improved health conditions and the government's laissez-faire attitude toward fertility and population growth. The population growth rate, though still low for an Asian country, has increased since 1960 and is now estimated to be about 2 percent per year. In 1973, 41.5 percent of Burma's 28 million inhabitants were under age 15, and 6 percent were older than 60. Estimated mean ages at marriage for males and females and the proportion of single females were all somewhat higher than might be expected.

A large exodus of foreign residents and a government policy since independence of restricting immigration has normalized the previously high sex ratio of the population so that the overall sex ratio of 1973 resembled that of the indigenous population during the prewar years. Considerable indigenization of the population has taken place since the military coup of 1962, with the result that only 5 percent of the population was classified as foreign in 1973.

The pace of urbanization has been slow in Burma. About one-quarter of the population was classified as urban in 1973 and again in 1983. But educational levels have risen substantially in recent years. By 1973 nearly three-quarters of the population was literate and slightly more than one-third had completed some formal schooling. Education of females, traditionally neglected, has shown especial improvement. Burma's economy is predominantly agrarian, with nearly two-thirds of the work force engaged in agriculture.

Population growth can be seen as both a resource and a constraint. For a developing country like Burma, rapid growth is likely to be more of a

Table 14. Expectation of life at birth: Burma, 1921–80

Period	Males	Females
1921–31[a]	30.6	31.0
1950–55[b]	38.7	41.4
1955–60[b]	41.1	44.0
1960–65[b]	43.6	46.5
1965–70[b]	46.1	49.0
1970–75[b]	48.6	51.5
1975–80[c]	51.0	54.1

Sources: a. United Nations (1967:718).
b. United Nations (1979:522).
c. United Nations (1982:896).

constraint to development than a resource. The current trend toward a more youthful population can be expected to generate many problems. For example, it will increase the need for teachers, school buildings, and school administrators. The difficulty of providing jobs for growing numbers of youthful entrants to the labor market is likely to cause hardship for many families and individuals. Furthermore, a youthful age structure implies a demographic momentum for some years that will fuel further population growth. Future cohorts in the reproductive ages are likely to be larger than preceding ones, thus increasing the annual number of births unless reproductive behavior is modified by new social forces such as changes in attitudes and preferences. All other things being equal, the trend toward a young population can be expected to interfere with the economic modernization programs aimed at raising the living level of the people. Demographic research is needed about the means and stages at which Burma's population growth rate might be stabilized.

There are no visible signs of population pressure in Burma at present. The crude density of 52 persons per square kilometer is low by modern standards. Burma is rich in natural resources that are yet to be exploited. Development of those resources to raise the living level of the population has been the major planning objective of Burma's recent governments. The present government views the current labor shortage as an obstacle to development and sees the rapid population growth of the 1960s with little alarm. Burma's population challenge lies not so much in providing subsistence to a growing population as in developing its human resources. A shortage of professional and skilled labor has been particularly acute in recent times owing to the departure of such persons from the country.

More studies are needed for a comprehensive assessment of Burma's economic and social trends. The 1983 Census collected much more infor-

mation about the Burmese population than the 1973 Census and, when tabulated and published, will permit a fuller exploration of demographic dynamics in Burma. Until then, Burma will remain an enigma to demographers, just as demography has been comparatively unknown in Burma.

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